

Safety and health alert

12/96 Electrical hazards in ceiling spaces

Incident

Two people have been electrocuted and one person received an electric shock working in the ceiling space of pre-1960 houses in and around Perth in the last two years. In all three incidents the people made contact with an electric conductor with decayed insulation.

INCIDENT A -- a person was electrocuted working in the ceiling space of his house in March 1994, apparently attempting to drill a hole in the top wooden beam of a wall. He made contact with an electrical conductor with deteriorated insulation and touched the active conductor with his left hand, completing an electrical circuit through his body to the earthed metal drill or earthed metal roof.

INCIDENT B -- a plumber received an electric shock attempting to rejoin two sections of copper pipe in a ceiling space in March 1994. It seems a piece of copper pipe made contact with an exposed live conductor with decayed insulation and the electrical current earthed through the plumber and the copper pipe in his hand.

INCIDENT C -- a licensed electrical worker was electrocuted in the ceiling space of a private house in December 1995. He was installing an electrical supply for an air conditioning unit when he made contact with an electrical conductor with deteriorated insulation and an uninsulated earth conductor.

Factors

The Office of Energy advises that houses built before 1960 were usually wired with rubber insulated cables. High summer temperatures accelerate the deterioration of rubber insulation and make it brittle. The insulation can break off, especially if disturbed, and expose potentially dangerous electrical conducting wires.

Recommendations

1. When entering ceiling spaces of pre- 1960 buildings:
 - o turn off the main switch to isolate the electrical supply, and lock or tag the main switch. (A locking out and tagging brochure is available on WorkSafe Western Australia's Internet service <http://www.safetyline.wa.gov.au>)
 - o remove fuses and place in a secure area well removed from the main switch
 - o take care not to disturb or touch any electrical wiring or equipment.
2. Owners of pre-1960 buildings are advised to have wiring checked by a licensed electrical contractor.



3. Do not install air conditioning units or ceiling insulation into pre-1960 houses until the electrical installation has been checked and passed by a licensed electrical contractor.
4. Contact the Office of Energy for safety advice if in doubt.

WorkSafe Western Australia acknowledges the assistance of the Office of Energy in preparing this information.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

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